AMENDMENTS TO THE SPECIFICATION

I.   Please replace the SPECIFICATION, pages 1 – 7, with the following amended SPECIFICATION:

Background of the Invention

1. Field of The invention

The present invention ~~is to~~ provides a coding method with dynamic positioning. More particularly, the dynamic positioning coding method is used in ~~the grain~~ a die pick-up process. By using the dynamic positioning coding method provided in the present invention, ~~it~~ a positioning system can effectively pick-up ~~the grain~~ a die from a wafer and then put it to ~~the~~ a bin.

2. Description of the Prior Art

In the traditional ~~grain~~ die pick-up process, ~~it~~ the apparatus first ~~clarifies~~ classifies the exclusive bin for each grade of the ~~grain~~ dies. Then, it picks up all the ~~grains~~ dies from one wafer into the exclusive bin ~~of~~ for the ~~each~~ respective grade. Each ~~grain~~ die herein ~~is with~~ has multiple semiconductor circuit components, and the wafer has ~~the~~ a rectangular array of ~~the~~ a multiple-die ~~grain~~ arrangement.

~~Please referring~~ Referring to Figure 1, ~~it~~ there is shown, a prior art ~~showing a grain~~ die pick-up process. One of the ~~grains~~

dies 1 is picked up from ~~the~~ a fixed ~~place~~ position on ~~of~~ the wafer 2. The pick-up method can remove the ~~grain~~ die from the wafer 2 through the pick-up apparatus 3. The pick-up apparatus can be a robotic arm, and the wafer 2 can be supported by the wafer base. By the position from rotating the wafer base, the relative movement between the robotic arm and the wafer base leads the ~~grain~~ die being picked from the wafer, and then, the ~~wafer~~ die is moved to the exclusive bin 4 ~~of the grain~~. This kind of conventional ~~grain~~ die pick-up method can easily ~~remove~~ move the wafer into the right position, particularly for ~~the~~ large-size wafer_s_. According to the ~~fast~~ first change of the technique development, the size of the wafer becomes larger, but the ~~grain becomes~~ dies become more and ~~denser~~ more dense. Therefore, the distribution range in the different grades of the ~~grains~~ dies is broader. The traditional design of positioning systems, with a robotic arm trying to rotate the wafer and put the ~~grain~~ dies in the right position becomes more complicated and more difficult. This has a restriction on the equipment, and the accuracy of the ~~gain~~ die pick-up process ~~faces the problem~~.

Referring ~~More, please referring~~ to Figure 2, [[. It]] ~~is a prior art showing the~~ flow chart of the prior art ~~grain~~ die pick-up process is shown. ~~By using~~ Using the conventional technique to pick-up from the wafer, firstly ~~it tests~~ in step 501 all the ~~grain~~ die sorts on the wafer ~~501~~ are tested, then, ~~it clarifies~~ the sorts are classified into multiple ~~consequent~~ resulting grades. For example,

they ~~are~~ range from the first grade to the twelfth grade. Further, ~~it~~ ~~assigns~~ in step 502 the N-th bin is assigned as the exclusive bin for the ~~grain~~ die of the N-th grade ~~502~~. For example, the first bin is for the first grade of ~~the grain~~ dies. Then, in step 503 the wafer is rotated and it leads ~~the grain~~ a die of the N-th grade to be positioned on the down side ~~503~~ of the pick-up apparatus. ~~More~~ Further, ~~it picks up~~ in step 504 the ~~grain~~ die of the N-th grade is picked up, and then ~~puts~~ it is put into the exclusive bin ~~504~~ for the ~~grain~~ die of the N-th grade. Finally, in decision step 505, it ~~can~~ is determined if all of the ~~grains~~ dies have been picked up completely ~~505~~. If all of the ~~grains are~~ dies have been completely picked up ~~completely, it implements~~ the ~~grain~~ die pick-up process has been implemented. However, if it is not completed, the ~~grain~~ die pick-up process will ~~be continuous~~ continue to be performed until ~~finishing~~ all the ~~grain~~ dies have been picked-up. ~~While~~ In addition to the grades of the ~~grains~~ dies in the wafer ~~are with~~ have a broad distribution range, ~~the~~ a large movement range in the pick-up apparatus occurs as ~~well as~~ do other problems ~~happens~~. ~~More~~ Further, some ~~un-reaching~~ unreachable dead angles will ~~happen~~ result.

Summary of the Invention

According to the above description, the present invention ~~is to~~ provides a coding method with dynamic positioning. It can effectively improve the ~~grain~~ die pick-up process. By using the

dynamic positioning coding method, ~~it firstly picks up one of~~ any one of the dies is first picked up ~~grains~~, and ~~tests it~~ tested as well as being defined ~~defines it~~ as a grade for the ~~grain~~ die. Then, ~~it puts~~ the ~~grain~~ die is put into a bin, and ~~defines~~ the bin is defined as the exclusive bin for the grade of the ~~grain in~~ die at the same time. Then, ~~it continues to~~ the process continues with the dies being picked up ~~the grain~~ until all of the ~~grains~~ dies are in their exclusive bins. ~~It does not arrange the~~ The exclusive bins are not arranged in advance, ~~but only defines~~ the exclusive bins only being defined for the actual ~~grain~~ die grade distribution. This can ~~fast complete~~ speed up the completion of the ~~grain~~ die pick-up process ~~thereto~~ and shorten the movement distance of the ~~grain~~ die pick-up process. Further, it can effectively overcome the problem of large movement distance in the pick-up apparatus as well as more complicated problems. The process of ~~the grain~~ die pick-up can be accurate and more efficient.

~~Summary of the Invention~~

The present invention ~~is mainly to~~ provides a coding method with dynamic positioning. More particularly, ~~it~~ the present invention is used in a ~~grain~~ die pick-up process. The dynamic positioning coding method does not arrange the exclusive bins in advance, but only defines the exclusive bins for the actual ~~grain~~ die grade distribution. This can ~~fast~~ quickly complete the ~~grain~~ die pick-up process. Further, it can shorten the movement distance of the pick-up apparatus. ~~More~~ Further, it can effectively solve the

problem of ~~the~~ large movement <u>distance in the pick-up apparatus</u> as well as other complicated problems. Therefore, the ~~grain~~ <u>die</u> pick-up process can be more ~~accuracy~~ <u>accurate</u> and more ~~efficiency~~ <u>efficient</u>.

For a more complete understanding of the present invention and for further advantages thereof, reference is now made to the following description taken in conjunction with the accompanying drawing, in which:

Brief Description of the Drawings

Figure 1 is a conventional ~~grain~~ <u>die</u> pick-up graph;

Figure 2 is one conventional ~~grain~~ <u>die</u> pick-up flow chart; and

Figure 3 is <u>a</u> ~~one of the~~ preferred ~~embodiments~~ <u>embodiment</u> according to the present invention showing the flow chart of the dynamic positioning coding method for sorting ~~grain~~ <u>die</u>.

Detailed Description of the Preferred Embodiments

The present invention ~~is to~~ provide<u>s</u> a coding method with dynamic positioning. More particularly, the dynamic positioning coding method is used in the ~~grain~~ <u>die</u> pick-up process. It uses the ~~grain~~ <u>die</u> pick-up step of the dynamic positioning coding method to pick up one of the ~~grains~~ <u>dies,</u> and then tests the ~~grain~~ <u>die</u>. According to the result of the ~~grain~~ <u>die</u> testing, it ~~clarifies~~ <u>classifies</u> the grade for the ~~grain~~ <u>die</u>. ~~More~~ <u>Further,</u> it puts the ~~grain~~ <u>die</u> to one of the bins. In the meantime, the bin is ~~clarified~~

classified as an exclusive bin for the grade of the ~~grain~~ die. Further, it continues ~~the~~ to complete the pick-up process until all the ~~grains~~ dies are in their exclusive bins. The present invention only defines the exclusive bins for the actual ~~grain~~ die grade distribution ~~thereto~~ thereof to quickly complete ~~fast completes~~ the ~~grain~~ die pick-up process. This can shorten the movement distance of the pick-up apparatus. ~~More~~ Further, it can effectively solve the problem of the large movement of the pick-up apparatus as well as other complicated problems. Therefore, the ~~grain~~ die pick-up process can be made more ~~accuracy~~ accurate and more ~~efficiency~~ efficient.

For a further description, please ~~referring~~ refer to Figure 3. ~~It~~ Fig. 3 is a flow chart of one of the preferred embodiments according to the present invention showing ~~the flow chart of~~ the dynamic positioning coding method for sorting ~~grains~~ dies. The dynamic positioning coding method according to the present invention is used in the ~~grain~~ die pick-up process. ~~It first picks up~~ First, in step 601 the N-th ~~grain 601 in the step~~ die is picked-up by using a pick-up apparatus to perform the pick-up motion. [[,]] The pick-up apparatus can be a robotic arm. Apart from this, in step 602, ~~it tests~~ the grade for the N-th grain ~~602~~ is tested. The method for testing the ~~grain~~ die can be a yield test. The result of the yield test can recognize the condition of the defect in the ~~grain~~ die ~~covering with semiconductor thereto~~ and treat it as a classification standard. By this standard, the ~~grains~~ dies can be divided into

multiple grades. The expression for the grade can be a natural number, an integral or a defect percentage. Then, <u>in step 603</u> it ~~determines~~ <u>is determined</u> if the grade of the ~~grain~~ <u>die</u> has ~~its~~ <u>an</u> exclusive bin ~~603~~. If there is an exclusive bin, ~~it puts~~ the N-th ~~grain~~ <u>die is put</u> into the N-th exclusive bin of ~~the~~ <u>that</u> grade <u>in step</u> 604. If there is no exclusive bin, then, <u>in step 605</u> ~~it picks~~ the M-th bin ~~and defines it~~ <u>is defined</u> as an exclusive bin for the N-th ~~grain~~ <u>die</u> or ~~the grain~~ <u>a die</u> with the same grade ~~605~~. M here is a natural number. Further, <u>in step 606</u> the pick-up apparatus goes back and check<u>s</u> if there <u>are</u> ~~is~~ any ~~grain~~ un-picked ~~606~~ <u>dies</u>. If there ~~is~~ <u>are</u> no ~~grain unpicked~~ <u>more dies to pick-up</u>, then, ~~it completes~~ the pick-up process <u>is completed in step</u> 607. If there is still a ~~grain unpicked~~ <u>die to be picked-up</u>, then, ~~it repeats the~~ steps 601-606 <u>are repeated to continue</u> ~~for further~~ the pick-up process.

For example, first<u>,</u> ~~it picks up~~ the ~~first grain~~ <u>closest die is picked-up in step</u> 601, and ~~tests the first grain as the first grade~~ <u>tested in step</u> 602. <u>The</u> ~~If the~~ tested grade <u>in step 602</u> is the first grade, <u>and in step 603</u> it ~~has to~~ <u>is</u> determine<u>d</u> if the grade of the ~~grain~~ <u>die</u> has ~~its~~ <u>an</u> exclusive bin ~~603~~ for the first ~~exclusive bin~~ <u>grade</u>. If so, the ~~first grain~~ <u>die</u> is put into the exclusive bin <u>for the first grade in step</u> 604. If not, then, the ~~first~~ <u>closest</u> bin is ~~picked up~~ <u>selected</u> and ~~is~~ defined as the exclusive bin ~~605~~ for the grade of the ~~grain~~ <u>die in step 605</u>. Further, <u>in step 606</u> it ~~determines~~ <u>is determined</u> if there is any ~~grain there 606~~ <u>more dies</u>. If there is still ~~one~~ <u>another die,</u> ~~it~~ <u>the process</u> goes back to the first step for

picking up the N-th ~~grain~~ die and continues until ~~finishing~~ all of the ~~grain pick-up~~ dies are picked-up. According to the above description, the present invention ~~is to~~ provides a dynamic positioning coding method. It does not arrange the exclusive bins in advance, but only defines the exclusive bins for the actual ~~grain~~ die grade distribution. This can ~~fast~~ quickly complete the ~~grain~~ die pick-up process ~~thereto~~ and shorten the movement distance of the ~~grain~~ die pick-up ~~process~~ apparatus. Further, it can effectively overcome the problem of large movement distance in the pick-up apparatus as well as more complicated problems. The process of ~~the grain~~ die pick-up can be accurate and more efficient.

~~In conclusion, the present invention meets novelty, improvement, and is applicable to the industry. It therefore meets the essential elements in patentability. There is no doubt that the present invention is legal to apply to the patent, and indeed we hope that this application can be granted as a patent.~~

Although the present invention has been described in detail, with respect to alternate embodiments, various changes and modifications may be suggested to one skilled in the art, and it should be understood that various changes, suggestions, and alternations can be made hereto without departing from the spirit and scope of the invention as defined by the appended claims.